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AUTHOR Crossman, Leslie L.
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ABSTRACT

This study investigated the relationship between sexual aggression and date rape and the character traits of anger, hostility, impulsivity, psychopathology, peer pressure, and pornography use. Male college students (N=480) completed a questionnaire that consisted of 10 instruments measuring character traits and sexual aggressive behavior. Areas addressed in the questionnaire included background information (age, ethnicity, classification and year in school), sexual experiences, the relationship between the victim and the offender, the likelihood to rape, hostility toward women, anger, impulsivity, psychopathology, validity, and pornography use. The findings revealed that 37% of the male respondents used some type of verbal pressure to obtain sexual intercourse on at least one occasion. The percentage of males who admitted to using force to obtain sexual intercourse was 2.4%, while 1.6% admitted to raping a woman. The results indicated that males who used pornography and experienced more pressure from their peers were disproportionately involved in sexual aggression and date rape. Difficulty with expressing anger was found in males who manipulated circumstances in order to obtain sex. Impulsivity, hostility toward women, and psychopathology were not predictive of sexual aggression. The findings are supportive of previous research linking sexual aggression to pornography use and peer influences. Thus, interventions in these areas may be particularly effective in minimizing the occurrence of these destructive behaviors. (Author/NB)

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Date Rape and Sexual Aggression in College Males: Incidence and the Involvement of Impulsivity, Anger, Hostility, Psychopathology, Peer Influence and Pornography Use

Leslie L. Crossman

Texas A&M University 77843-4425

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Date Rape and Sexual Aggression in College Males: Incidence and the Involvement of Impulsivity, Anger, Hostility, Psychopathology, Peer Influence and Pornography Use

Abstract

The relationship between sexual aggression and date rape and the character traits of anger, hostility, impulsivity, psychopathology, peer pressure, and pornography use were investigated. Four-hundred and eighty college males were administered a questionnaire that consisted of 10 instruments measuring the mentioned character traits and sexual aggressive behavior. The results indicate that males who use pornography and experience more pressure from their peers are disproportionately involved in sexual aggression and date rape. Difficulty with expressing anger was found in males who manipulated circumstances in order to obtain sex. Impulsivity, hostility towards women and psychopathology were not predicitive of sexual aggression. The findings are supportive of previous research linking sexual aggression to pornography use and peer influences. Thus, interventions in these areas may be particularly effective in minimizing the occurrence of these destructive behaviors.

Date Rape and Sexual Aggression in College Males: Incidence and the Involvement, Anger, Hostility, Psychopathology, Peer Influence and Pornography Use

Overview

The problem of sexual aggression among college students was first documented by Kanin (1957). Since that time, many studies have found evidence that coercive and/or violent sexual behavior is relatively widespread in today's college population. Studies indicate that among college students, sexual aggression and rape are rare among strangers, and occur more commonly among acquaintances (Meyer, 1985). It is clear that both men and women engage in aggressive sexual behavior (cf. Anderson & Thompson, 1990). Although such behaviors are noteworthy, whether they are performed by men or by women, there may be gender differences in the dynamics and the genesis of the behaviors. The present study was delimited to focus exclusively on ceorcive or aggressive behaviors of men. Previous studies indicate that male college students are involved in a wide spectrum of sexually coercive behaviors ranging from kissing a woman against her wishes to physically forcing a woman to have sexual intercourse (Koss & Oros, 1982; Muehlenhard, 1987; Rapaport & Burkhart, 1984). The frequency of unwanted sexual intercourse reported by women ranges between 8% (Divasto et al., 1984) and 25% (Skelton's study, cited in Craig, 1990). Rates of unwanted sexual contact range from 19.7% (Berger, Searles, Salem & Pierce, 1986) to 96% (Skelton's study, cited in Craig, 1990). Rates of forcing a woman to engage in sexual contact, reported by males, range from 10.7% (Byers & Lewis, 1988) to 57.3% (Muehlenhard & Linton, 1987). The rate of admission to forcing a woman to have intercourse ranges from 1.6% (Greendlinger & Bryne, 1987) to 7% (Muehlenhard & Linton, 1987).

Review of Literature

Sexual aggression can have lasting impacts on the victim. Many studies have found evidence that forced sexual experiences have a negative impact that creates both short and long-term difficulties (DiVasto, 1985; Kilpatrick et al., 1985; Koss et al., 1988; Notman & Nadelson, 1976). Female victims of date rape have been found to be depressed and anxious, have difficulty in future relationships, become less sexually satisfied, question their judgement and perceptions about men, distrust men, experience self-blame and have a decrease in their self-esteem. Based on the high incidence of sexual coercion and the effect it has on victims, researchers have attempted to determine what factors contribute to the occurrence of sexual aggression.

There are several risk factors that have been identified as leading to the occurrence of date rape and sexual aggression. Conflicting evidence exists regarding whether sexual aggression is more frequent with unfamiliar partners. Some researchers found that 24% to 47% of sexually aggressive episodes involved first dates or casual dates (Kanin, 1969; Koss cited in Sweet, 1985; Skelton, 1982, cited in Burkhart & Stanton, 1985). In contrast Muehlenhard and Linton (1987) found that both men and women reported knowing their partners almost a year at the time sexual aggression occurred. Power differences between men and women have been cited as a risk factor. In dating situations, the age difference between the couple, who initiates the date, who pays the dating expenses, and who provides the transportation are hypothesized to be related to power (Peplau, 1984).

A factor found to contribute to sexual aggression is miscommunication between men and women about the amount of sexual activity desired (Check & Malamuth, 1983; Muehlenhard & Linton, 1987). This miscommunication can involve men interpreting behavior more sexually, and men feeling "led on." Another factor is the dating location. Secluded locations such as a private home or apartment, or a parked car, were found to lead to sexual aggression (Miller & Marshall, 1987; Muehlenhard & Linton, 1987). The

final risk factor related to sexual aggression is alcohol or drug use. Studies have found an estimated one third to two thirds of rapists, and many rape victims, are intoxicated (Brozan, 1986; Lott, Reilley, & Howard, 1982; Meyer, 1984; & Russell, 1984). Alcohol and other drugs can be a risk factor because they reduce men's inhibitions against sexual violence and may make women less able to defend themselves.

Although over the past two decades, many researchers have examined different factors which may influence the occurrence of sexual aggression, much of this research has been without common focus or direction, i.e., without much theoretical basis. Only a handful of articles have been published that used a model to explain nonstranger sexual aggression. These models include a situational model (Craig, 1990), a hostile childhood experiences model (Malamuth et al., 1991), a model which relates different factors to "early date rape" and "relational date rape" (Shotland, 1985), an ecological model (Malamuth et al.,1991), a social control/social conflict model (Koss, Leonard, Bezley, & Oros, 1985), and Malamuth's (in press) multifactorial model.

The majority of the research on date rape and sexual aggression has involved either investigating the incidence or identifying various factors associated to male involvement in sexually aggressive behavior. Some of the individual factors that have been investigated as precursors of sexual aggression include sexual arousal, sexual fantasies, emotional states, expectancies of success or failure, attitudes facilitating or inhibiting aggression, antisocial personality characteristics, social skills, and coping responses (Bard et al., 1987; Finkelhor, 1984; Knight, Rosenberg, & Schneider, 1985; Russell, 1984). These individual factors may interact with situational factors, such as interpersonal relationships, norms about sexual behavior, media depictions of sexual behavior, degree of social toleration of and sanctions against deviant behavior, and the social status of women and children relative to men, to produce sexually aggressive behavior (Finkelhor, 1984; Pithers et al., 1983; Russell, 1984). There are several common areas in which the focus of date rape research can be categorized. These include

examination of the men who initiate coercive sexual encounters, the elements of the situation, and the relationship between the coercive male and coerced female. In the past, researchers attempted to develop a unifying theory of sexual aggression, but were unable to find one that adequately explained the phenomenon. In recent models sexual aggression has been viewed as a function of multiple factors.

Charactetistics of Males

In the sexual aggression literature, researchers have also examined characteristics that identify sexually coercive males and lead to male involvement in sexual aggression. One of these characteristics is male attitudes and beliefs. Studies have found that coercive males have more stereotypic views toward gender roles (Kanin, 1985), more traditional attitudes toward women (Fisher, 1985), a belief in rape myths (Burt, 1980; Koss, 1985), acceptance of interpersonal violence against women, and adersarial sex beliefs (Burt, 1980; Check & Malamuth, 1981). Burt (1980) hypothesizes that these beliefs form an interrelated attitudinal structure that can lead to participation in sexually aggressive behavior.

Adversarial sexual beliefs, acceptance of interpersonal violence and endorsement of force have all been found to be predictive of sexual coercion (Rapaport & Burkhart, 1984). Rapaport and Burkhart (1984) suggest that sexually coercive males act on a system of values which legitimize aggression. In addition to sexually coercive males justifying the use of aggression, they have also been found to have the character traits of anger and anger expression (Calhoun, Kelley, Amick, & Gardner, 1986).

Another character trait related to interpersonal aggression is hostility. Hostility toward women has been found to be related sexual coercion. Check, Malamuth, Elias and Barton (1985) found that men who score high on hostility toward women tend to believe that men and women are essentially adversaries in their sexual relationships with each other, tend to have traditional sex-role beliefs, tend to believe in various rape myths, and find explicit depictions of rape and sexually violent videotapes more stimulating.

They also admit to the use of various levels of force in their attempts to get women to have sex, and may become angry when women reject them. Few studies, however, have examined anger and the involvement of hostility towards women in self-reported acquaintance sexual aggression.

Another factor that has been related to male sexual aggression is the characteristic of impulsivity (Petty & Dawson, 1989), which has been tied to the characteristics of anger, hostility and aggression. Petty and Dawson (1989) found that men who used force in sexual experiences were more impulsive than those who used less or no force. They hypothesized that impulsivity may play a larger part in the use of sexual force in college men than in convicted rapists. Barratt and Patton (1983) have concluded that episodic aggression is related in their system of personality to the first order personality traits of anger/hostility and impulsiveness or impulse control. Liska and Roth (1988) similarly found that sexually aggressive men differed from nonsexually aggressive and nonaggressive men in that they had greater levels of impulsivity. Barratt (1990a) proposed that anger/hostility is the main "impulse motive" system that interacts with an "impulse control" system in episodic aggression. This two system approach was consistent with a number of human studies (Muhlbauer, 1985; Soubrie, 1986). Therefore, episodic aggression is seen as a function of a balance between the motive system of anger/hostility and a control/impulsive system. Barratt (1990b) presented data consistent with individuals demonstrating impulsive aggression, which involved a balance between levels of impulsiveness or impulse control and anger/hostility.

The MMPI has been frequently used to examine pathology in convicted sex offenders and to attempt to distinguish between different categories of sex offenders. The Psychopathic Deviant (Pd) Scale is the most used scale in studies of sex offenders, violent offenders and substance abusers. Some authors have reported that the psychopathic deviant/schizophrenia profile is common to aggressive criminals, including rapists. Rapaport and Burkhart (1984) reasoned, based on their research, that sexual

aggression was part of a general antisocial style and predicited that sexually coercive men should manifest more frequent and more intense nonsexual antisocial conduct. Rapaport (1984) found that sexually aggressive males were much more likely to have histories of antisocial conduct of all types. Therefore, she conlcuded that sexually aggressive males are characterized by both a general antisocial stance and a misogynistic attitudinal structure. Erickson, Luxenburg, Walbek and Seely (1987) found that sex offenders showed more psychopathic deviant/masculine profiles (11.3% vs. 1.9% for prisoners generally) and psychotic deviant/schizophrenia (14.4% vs. 6.8% generally) profiles than other prisoner groups. Rader (1977) found in a group of rapists, exhibitionists and non-sexual assault criminals, that the rapists scored significantly higher than the other two groups on the Psychopathic Deviant scale and Schizophrenia scales.

Koss, Leonard, Beezley and Oros (1985) suggested that undetected sexually aggressive men may be different from those who have been apprehended. They reported that in university students, the Psychopathic Deviant scale did not discriminate the degree of coercion used in the sexual assaults, although the actual scores for the sexually aggressive males and the non-sexually aggressive males were not noted. Psychoticism, measured using the Eysenck Personality Questionnaire, was found to be a predictor of sexual aggression (Malamuth, 1986), and to be related to accepting rape myths, likelihood of raping, and actual involvement in sexual aggression (Check & Guloien, in press). Koss et al.'s (1985) study is the only one that has attempted to use the MMPI with a college population in order to examine the relationship between MMPI scores and sexual aggression. No other studies have investigated the possible similarities or differences between convicted rapists and undetected sexually aggressive males on MMPI scale scores.

Another factor found to be related to college students' sexual experiences is their peer relationships. Men whose friends place a high value on sexual prowess are more likely to use coercive methods to attain sexual intercourse with women (Koss et al., 1985).

Males involved in sexual aggression, not only have male associates who they believe would condone aggressive behavior, but they are also subjected to peer influences to be sexually active (Kanin, 1985). Kanin (1985) also found that males' reputations with their peer group would be enhanced by aggressing against a female who was considered "deviant", such as being a "tease", a "pick-up", or "loose." Additionally, Kanin (1985) found that rapists are much more apt to have a history of collaborative sex, or be invovled either in a "gang-bang" or a sequential sharing of a female with a male friend. He hypothesized that sexual socialization of rapists was substantially influenced by a supportive hypererotic male culture.

The research of Malamuth and his colleagues (Malamuth & Check, 1983; Malamuth et al., 1986) suggests that sexually aggressive males may have different sexual arousal patterns from nonaggressive males. They found that males who responded with high levels of arousal (self-report) to the use of force were more aroused sexually by aggressive depictions of sexuality (self-report and penile tumescence). Check and Malamuth (1983) found that high sex-role stereotyping males showed high levels of arousal to rape, especially acquaintance rape, and that these levels were indistinguishable from a group of rapists studied by Abel et al. (1977). Malamuth (1981) found that "high likelihood to rape" men have significantly higher sexual arousal to all forms of rape depictions in which the assault is clearly abhorrent to the victim. Based on this finding, it appears that males with higher sexual arousal to sexual force are more likely to use force to obtain sex if the opportunity occurs and if they could not be detected. Rapaport (1984) found that sexually coercive males were sexually aroused by rape presentations as well as a depicition of consenting intercourse. Thus, Rapaport (1984) suggests that sexual activity comes to serve not just sexual motives, but needs for power and anger expression.

Along with research on differential sexual arousal, several researchers have begun to investigate and theorize about the potential effects of sexually explicit media materials on

sexual violence. Therefore, a final characterisitcs that has been related to male sexual aggression is pornography use. Recent research on the effects of aggressive-pornographic media portrayals indicate that, contrary to earlier expectations, exposure to such materials may lead to men's increased acceptance of rape myths and interpersonal violence against women (Demare', 1985; Malamuth & Check, 1981a), more frequent violent sexual fantasies (Malamuth, 1981a), and a greater willingness to aggress against women in a laboratory setting (e.g., Donnerstein & Barrett, 1978; Malamuth, 1984). Several studies have been conducted in which participants have been angered and then shown pornographic stimuli. The results tend to reveal an increase in aggressive behavior when anger is added as a variable (Meyer, 1972; Zillmann, 1971).

In contrast, there has not been much support for the assertion that exposure to aggressive pornography increase a person's sexual responsiveness to such stimuli (Malamuth & Ceniti, 1985). A nonsignficant trend was found by Malamuth et al. (1980) when they investigated heightened sexual arousal to a rape scene after reading a sadomasochistic portrayal. Later studies failed to find a sexual-arousal-enhancement effect to exposure to aggressive pornography occurring with single presentations (Malamuth, 1981b; Malamuth & Check, 1980) as well as with repeated presentations over a period of several weeks with four aggressive-pornographic feature-length movies (Ceniti & Malamuth, 1984).

Based on their research findings, Demare, Briere, and Lips (1988) suggested that a unique combination of support for sex and aggression in some pornographic stimuli and certain attitudes may produce a proclivity toward violence, a tendency that may interact with other relevant variables (e.g., peer support for violence) to result in actual sexual aggression (Malamuth, 1984; Malamuth, Check, & Briere, 1986). In addition, recent research (Donnerstein, 1983; 1984) has found that exposure to aggressive pornography increases aggression against women in a laboratory context.

Recent research has shown that exposure to nonaggressive pornography can have mixed effects of aggression against women. Donnerstein and Barrett (1978) found that nonaggressive pornography had no effect on subsequent aggression unless constraints against aggressing were reduced. Extensive exposure to nonaggressive pornography has been related to a significant increase in males' sexual callousness toward women, and a propensity to trivalize rape (Zillmann & Bryant, 1982; 1984). Check and Guloien (in press) found that viewing sexually explicit material at least once per month was related to accepting rape myths and violence against women, endorsing adversarial sex beliefs, reporting a likelihood to rape and force women into unwanted sex acts, and more sexual calluosness. In addition, high frequency pornography consumers who were exposed to nonviolent, dehumanizing pornography were particularly likely to report that they might rape, were more seuxally callous, and report engaging in more acts of sexual aggression.

Russell's (1982) research provided support for a more direct link between pornography and sexual aggression in the general population. In her landmark study 10% of the women representing the general population in her study reported that they had been upset by being asked by their partners to imitate acts in pornographic material. Of the 87 women who had been raped by their husbands or partners, 24% reported being asked to imitate similiar experiences their partners had read about in pornography. Currently there are no studies that investigate the relationship between pornography use and sexual aggression in college populations.

Purpose of the Study

Numerous studies, for the past 30 years, have examined the incidence and prevalence of sexual aggression in college populations and they have drawn attention to the pervasiveness of the problem. Many studies have also investigated the effects of sexual aggression on victims, personality and attitudinal characteristics of perpetrators, male and female attribution of sexual aggression and rape, a variety of risk factors and situational

variables involved sexual aggression, as well as treatment and prevention of sexual aggression on college campuses.

As indicated previously, former investigations have not specifically examined the relationship between the victim and offender at the time of the sexually aggressive event. In addition, there also have been few empirical studies specifically examining the relationship between anger, hostility, impulsivity, psychopathology, peer influence or pornography use and sexual aggression in dating situations. Therefore, the purpose of the present study was to investigate, in college males, the relationship between sexual aggression and date rape and the previously mentioned psychological and character traits. One additional analysis involved the instrument used to measure sexual aggression, the Sexual Experiences Survey. This instrument was constructed to examine several factors of sexual aggression and date rape. Therefore, it seemed logical to conduct a factor analysis on this instrument to examine factor structure, as an independent and important contribution to the literature in this area.

METHOD

The purpose of the present study was to compare the differences in college males who have and have not been involved in different levels of sexual aggression, including date rape. The present study examined the following research questions:

Research Question I. What is the factor structure of the Sexual Expeiences Survey?

Research Question II. What are the differences on males' sexual aggression scores and the following variables: (a) duration of the relationship with the victim, (b) likelihood to rape, (c) hostility toward women, (d) anger, (e) impulsivity, (f) psychopathology (psychopathic deviant and schizophrenia), (g) reference group, and (h) pornography use?

Research Question III. How much of the relative variance in sexual aggression and date rape is explained by (a) the relationship between the victim and offender, (b) likelihood to rape, (c) hostility toward women, (d) anger, (e) impulsivity, (f) psychopathology, (g) reference group, and (h) pornography use?

Research Question IV. How much of the relative variance in likelihood to rape is explained by (a) hostility toward women, (b) anger, (c) impulsivity, (d) psychopathology, (e) reference group, and (f) pornography use?

Sample

To obtain a sufficient incidence of sexual aggression events for this investigation, 480 undergraduate male students from Texas A&M University participated in the study. Undergraduate students were used because the incidence of sexual aggression cited in previous studies was found to be high on college campuses. The sample was drawn from students taking courses in the psychology and educational psychology. The educational psychology courses chosen encompassed a cross-section of the student body, due to the general nature of the classes. The students who volunteered to participate received extra credit in their class. The students used from the psychology department were taken from the psychology subject pool. Students taking lower level psychology courses participate in five hours of psychological studies as one of the course requirements. The students in the subject pool reflect a a cross-scetion of the student population in terms of major and class-level. Sign-up sheets indicated that participation involved filling out questionnaires regarding dating experiences. The mean age of the subjects was 19.2 years (SD= 1.77). Approximately eighty percent of the subjects were Caucasian, 2.3% were African-American, 10.4% were Hispanic, and 4.8% were Asian.

Instruments

A questionnaire was constructed composed of the following sections: background information (age, ethnicity, classification and year in school), a measure of sexual experiences, a measure of the relationship between the victim and offender, a measure of the likelihood to rape, a measure of hostility toward women, a measure of anger, a measure of impulsivity, measures of psychopathology, a validity scale, and pornography use questions.

Dependent Variable.

Sexual Experiences Survey. This survey (Koss & Oros, 1982) consists of 13 items, 10 of which are descriptions of circumstances under which sexual intercourse could occur. These vary in the degree to which sexual coercion or aggression is present, such as, "Have you ever used some degree of physical force (twisting her arm, holding her down)?" Respondents circle yes or no in response to each item. A representative sample of 3,862 university students was used in the initial development of the scale. In a previous study reported by Koss and Gidycz (1985) the internal consistency alpha coefficient of data from the survey was .74. Test-retest reliability was found through two administrations of the test, one week apart. Mean item agreement across the two administrations was 93% (Koss & Gidycz, 1985). This scale has been used many times in sexual aggression and date rape research reporting findings that anywhere between 28% and 57% of males have been involved in sexual aggression.

Independent Variables.

Relationship of Offender and Victim. A question was added at the end of the Sexual Experiences Survey questionnaire to investigate the duration and degree of relationship between the offender and the victim in the sexually aggressive incident, using a five-point scale. The scale includes relationships ranging from acquaintance to wife. The item was as follows: "If you answered 'Yes' to any of the above (*Sexual Experiences Survey*), what was your relationship to the most recent victim invovled in the event?"

Likelihood of Rape Scale. This question, also added to the end of the Sexual Experiences Survey, attempts to identify individuals who may possess a higher propensity to rape, but have not necessarily actually raped. Subjects were asked to indicate the likelihood that they personally would rape if they were assured of not being caught and punished. Responses are indicated on a five point scale ranging from (1) Very unlikely to (5) Very likely. Malamuth (1981) reviewed the use of this question in a variety of studies. An average of about 35% of males indicated any likelihood at all of

raping (i.e., a 2 or above), and an average of about 20% indicated higher likelihoods (i.e., a 3 or above). The item was: "How likely would you be to rape a woman if you were assured of not being caught or punished?"

The Hostility Toward Women Questionnaire. This measure was devised by Check, Malamuth, Elias and Barton (1985). It contains 30 items in which the subjects respond either true or false. It was constructed under the assumption that this hostility was no different from general hostility "except that it is directed specifically toward women" (Check, Elias & Barton, 1988). The questionnaire was devised using a total of 118 non-redundant items from scales existing in the literature that were rewritten to refer to women. The 30 true-false items with the highest item-total correlations were selected for the Hostility Toward Women scale. The KR-20 reliability of data from this 30 item scale was .89 in a previous study by Check, Malamuth, Elias and Barton (1985).

Criterion and discriminator variables were chosen for the categories of (a) attitudes regarding sexual and non-sexual aggression, (b) sexual motivations and (c) sexually and non-sexually aggressive behavior, to determine the validity of the scale. Check, Malamuth, Elias and Barton (1985) found that the Hostility Toward Women scale had some discriminant validity in predicting attitudes relating to violence primarily against women. Power motivation was found to be related to hostility toward women, where love and affection motivation was not. The Hostility Toward Women scale was found to be correlated with measures of self-reported sexual aggression, including rape, and correlated with reported past use and predictions of future use of sexual aggression. The scale was found to be unrelated to non-sexual aggression, such as family violence. The Hostility Toward Women scale items were balanced with an equal number of pro-trait and con-trait items. The scale was found to be relatively uncontaminated by social desirability (Check, 1984).

Barratt Impulsivity Scale. The Barratt Impulsivity Scale (BIS) was first developed by Barratt in 1965 through factor analysis, and has since been revised 11 times. The

forms of the BIS were based primarily on empirical item analyses and multivariate studies. Barratt (1990a) proposes that impulsive aggression involves a balance between levels of impulsiveness or impulse control and anger/hostility. The BIS-10 was used in this present investigation. Barratt (1985), through his research on impulsivity, outlined three subdimensions of impulsiveness as subscales of the BIS-10: a) motor impulsiveness (IM) - the tendency to act without thinking; b) cognitive impulsiveness (IC) - the tendency to make-up one's mind quickly; c) non-planning impulsiveness (INP) - the tendency to "live for the moment" and not plan ahead. The Cronbach alphas for data from the subtraits were .87, .91 and .86 in a previous study by Barratt (1985). Barratt states that the BIS-10 Score is the sum of the three subtraits and is more reliable than using any of the subscale scores, which are not orthogonal.

The Stait-Trait Anger Expression Inventory. This is a 44 item inventory, developed by Spielberger (1988), that provides concise measures of the experience and expression of anger. It is divided into several subscales: a) Anger-Out, b) Anger-In, c) Anger Control, d) Anger Expression, e) and Angry Temperament. Anger-Out involves the expression of anger toward other people in the enviornment. Anger-In is a measure of the frequency with which angry feelings are held in or suppressed. Anger Control measures the frequency with which an individual attempts to control the expression of anger. Anger Expression provides a general index of the frequency that anger is expressed, regardless of the direction. Angry Temperament measures the tendency to experience anger without provacation, and Angry Reaction is the tendency to express anger when criticized or treated unfairly. Spielberger (1988) in a previous study reported internal consistency reliability of .84 for Angry Temperament scale scores and .75 for Angry Reaction scale scores . Internal consistency reliability for Anger-In scale scores was reported to be .72, Anger Out was .62, and for Anger Control .58.

MMPI-2: Psychopathic Deviant Scale (Scale 4) . This scale was used as a measure of psychopathology. Scale 4, which has 50 items, was developed to identify individuals

with psychopathic personalities, or individuals who are amoral or asocial (Hathaway & McKinely, 1942). High scores are indicative of individuals who are impulsive, immature, insensitive, hostile and are likely to predict some conflict with authority. Graham (1990) states that Scale 4 is related to age, with some normal adolescent groups and college students tending to score slightly higher scores on this scale, a T-score range of 55 to 60. One way to conceptualize this scale is to think of it as a measure of rebelliousness, with higher score indicating rebellion and lower scores indicating acceptance of authority (Graham, 1990). The highest scorers on the scale rebel by acting out in antisocial or criminal ways.

MMPI-2: Schizophrenia Scale (Scale 8). This scale was also used as a measure of psychopathology. Scale 8, which contains 78 items, was developed to identify individuals diagnosed with schizophrenia. It also, however, identifies a heterogenous group of disorders characterized by disturbances of thinking, mood and behavior. Ambivalent or constricted emotional responsiveness is common, along with feeling misunderstood and behaving in ways that may be withdrawn, aggressive or bizarre (Graham, 1990).

MMPI-2: Lie Scale. The L Scale, which is a 15 item scale, was included as a measure of validity of the data in the present study. The scale was constructed to detect a deliberate and rather unsophisticated attempt on the part of the subjects to present themselves in a favorable light (Meehl & Hathaway, 1946). *Given the sensitive nature of the self report data in the present study, this was considered an important design feature.*

Pornography Use Questions. The pornography items are created by the examiner and partially derived from some of the items used in a study completed by Sommers and Check (1987) to investigate the role of pornography in the verbal and physical abuse of women. The items in that study were based on a questionnaire that Russell (1982) used in her San Francisco survey examining the occurrence of rape in marriage. The present researcher constructed additional questions, added in the present study, addressing issues

such as the type of pornography used, frequency of consumption, and whether the subject threatened his partner in order to get her to comply with his demands to imitate pornographic materials. Reliability analyses were calculated on this instrument as part of this investigation. These items are included in Appendix A.

Reference Group Questions. Questions were asked concerning the influence of peer reference groups on sexual socialization and on the use of sexual aggression. These questions were taken from Kanin's (1967b) study that examined the influence of reference groups on sexual behavior. These questions involved the amount of pressure received from friends to seek premarital sex, status lost from being a virgin, satisfaction with the amount of sex had, and the conditions in which it is justifiable to rape a woman.

Procedure

The majority of subjects indicated their interest in participating through the use of sign-up sheets posted in the department. The sign-up sheets indicated that participation involved filling out questionnaires that involved dating experiences. The subjects were tested either during scheduled class time or in an auditorium type of classroom in the evenings. They were widely separated so that no one was sitting directly beside someone else, to ensure privacy. Subjects were informed of the purpose of the research, participated voluntarily, and filled out an informed consent form presented in Appendix B. Consent forms were separated from the actual data as the subjects completed the questionnaire. Confidentiality was maintained through numerical coding.

All subjects were asked to fill out the questionnaire containing all of the instruments. The questionnaires were presented in counter-balanced order, with the Sexual Experiences Survey always appearing last in all cases to prevent these questions from contaminating responses to the other questions. All questionnaires were answered anonymously and instructions were given by the researcher, who is female. The sets of questionnaires for each individual were given a code. The subjects used scantron sheets

to fill in their responses to the questionnaire, their demographic information and their individual code.

The Lie scale was used as a screen for the data. The scores of any subject scoring a raw score higher than 13 on this scale were not used in the analysis. Subjects who omitted more than 10 items on the questionnaire were also excluded from the analysis. After removing 18 individuals, 480 subjects were used in the data analysis. To account for missing data before the analysis was begun, the mean for each question was used in place of the missing data. The preponderance of subjects had no missing data, and most of the subjects with any missing data omitted scores on only one or two items.

RESULTS

This report of data analysis is divided into three parts: preliminary analysis, primary analysis, and ancillary analysis. The preliminary analysis section consists of frequencies, percentages and reliability analyses. The analysis section consists of the analyses that were performed to answer the research questions presented previously. The ancillary analysis section consists of any additional questions that were examined, as well as result replicability analyses.

Preliminary Analysis

Table 1 presents the reported overall incidence of sexual experience and aggression committed by the males who participated in this study. The table includes both the frequency and percentage of response to each Sexual Experience/Aggression item.

INSERT TABLE 1 ABOUT HERE

First, a reliability analysis for each of the instruments was calculated using coefficient alpha, along with item-total statistics for the eight instruments. Dawis (1987) states that "reliability is a function of sample as well as of instrument, [and] it should be evaluated on a sample from the intended target population--an obvious but sometimes overlooked

point" (p. 486). The implications and limiting effects of not calculating a reliability analysis are exposed by Snyder, Lawson, Thompson, Strickland, and Sexton (1993, p. 218):

> Reliability coefficients for the data obtained on study instruments used in the empirical investigation prospectively provide a basis for determining, a priori, whether a proposed study and substantiative analyses are even plausible. These coefficients also allow the researcher to retrospectively interpret obtained effect sizes (e.g., r^2) against the ceiling created by the reliability coefficients obtained in a study.

It was important to empirically evaluate the reliability of the scores in this data set, even though previous measurement studies of the instruments have been conducted, because it is incorrect to say that "the test is reliable"; rather, scores or data have these characteristics. As Rowley (1976, p. 53) notes, "it needs to be established that an instrument itself is neither reliable nor unreliable." Sax (1980, p. 261) explains,

> Tests cannot be stable or unstable, but observations can. Any reference to the "reliability of a test" should always be interpreted to mean the "reliability of measurements or observations [i.e., a particular set of data] derived from a test."

As Thompson (1992, p. 436) emphasizes,

> This is not just an issue of sloppy speaking--the problem is that sometimes we unconsciously come to think what we say or what we hear, so that sloppy speaking does sometimes lead to a more pernicious outcome, sloppy thinking and sloppy practice.

Because scores are reliable (rather than tests), it was important to investigate the reliability of the scores for the data in the present study. The item-total statistics indicate the corrected item-total correlation between item responses and a score derived from all the other items on the measure, and the alpha- if-the-item-was-deleted for each item. These results are presented in Tables 2 through 7. The internal consistency reliability for

the Sexual Experiences Survey was .64, for the Hostility Toward Women Questionnaire was .81, for the Barratt Impulsivity Scale was .72, for the State-Trait Anger Expression Inventory subscales ranged from .93 to .72, for the MMPI-2 Psychopathic Deviant Scale was .60, for the MMPI-2 Schizophrenia Scale was .89, for the Pornography Use Questionnaire was .85, and for the Peer Influence Questions were .56. All of these were considered sufficiently high for further statistical procedures to be implemented, with the recommendations of Nunnally (1978).

INSERT TABLES 2 THROUGH 7 ABOUT HERE

Analysis

Factor Analysis

The Sexual Experience Survey was factored analyzed to determine the underlying factor pattern underlying the covariance structure from this measure of the dependent variable in the present study. Many researchers acknowledge the prominent role that factor analysis can play in efforts to establish construct validity. For example, Nunnally (1978, p. 111) noted that, historically, "construct validity has been spoken of as [both] 'trait validity' and 'factorial validity.'"

Similarly, Gorsuch (1983, p. 350) noted that, "A prime use of factorial analysis has been in the development of both the operational constructs for an area and the operational representatives for the theorectical constructs." In short, "factor analysis is intimately involved with questions of validity. . . . Factor analysis is at the heart of the measurement of psychological constructs" (Nunnally, 1978, pp. 112-113).

Principal components analysis, which is a method of transforming a given set of observed variables into another set of variables, was used and facotrs were rotated to the varimax criterion. The varimax rotation uses a slightly different criterion that simplifies each column of the factor matrix (Kim & Mueller, 1978). The four factor solution

accounted for 28.4% of the covariance among responses to the items. These factors were labeled: (I) "Threat of Physical Force", (II) "Use of Physical Force", (III) "Insistence", (IV) "Ambiguous Circumstances". The factor structure coefficients for the four factors are presented in Table 8.

INSERT TABLE 8 ABOUT HERE

Canonical Analysis

Pearson product-moment correlation coefficients were calculated among the four factor scores, relationship to the victim variable, the likelihood to rape variable, the total score on the Sexual Experience Survey and the seven independent measures, as well as their subscales. The correlation coefficients are reported in Table 9.

INSERT TABLE 9 ABOUT HERE

Canonical correlation analysis (Thompson, 1991) is a method for investigating the relationship between two sets of variables, a set of dependent variables and a set of independent variables, where each set contains two or more variables. This analysis allows for variables of any level of measurement and was developed to examine multiple variables simultaneously (Thompson, 1984). Researchers have for some time recognized that canonical correlation analysis is the most general linear model that subsumes all other parametric procedures (Baggaley, 1981; Fornell, 1978; Knapp, 1978).

A canonical correlational analysis was performed using the four factor scores ("Use of Physical Force", "Threat of Physical Force", "Insistence", and "Ambiguous Circumstances"), as the dependent variables and 13 other scores as independent variables. The canonical analysis of the relationship between the Sexual Aggression factor scores and the independent measures yielded a noteworthy canonical root of R=

.51802, (Wilks lambda = .61524, F=4.61044, df=52/1795.30, p < .000). Table 10 displays the canonical correlation coefficients, structure coefficients, squared structure coefficients, variate adequacy coefficients, communality coefficients, and redundancy coefficients for each of the four canonical functions. This table presents the standardized canonical function coefficients and structure coefficients from this solution.

INSERT TABLE 10 ABOUT HERE

For Function I, the squared canonical correlation coefficient indicates that 26.8% of the variance is linearly shared by these two variable sets after optimal weighting by the standardized function coefficients analogous to regression beta weights. The function coefficients suggest that the variables that contribute most to Function I are "Use of Physical Force" (FS2), "Insistence" (FS3), "Ambiguous Circumstances" (FS4), impulsivity, psychopathic deviancy, and pornography use.

The structure coefficients were also examined. A squared canonical structure coefficient represents the proportion of variance linearly shared between scores on a canonical composite variable and a given predictor or criterion variable. Interpreting structure coefficients is recommended by several researchers, including Levine (1977, p. 20), who suggests,

> I specifically say that one has to do this [interpret structure coefficients] since I firmly believe as long as one wants information about the nature of the canonical correlation relationship, not merely the computation of the [canonical function] scores, one must have the structure matrix [emphasis in original].

The variables that contributed most to Function I were "Use of Physical Force" (FS2), "Insistence" (FS3), " Ambiguous Circumstances" (FS4), hostility toward women, impulsivity, Anger-out, Anger-Control, psychopathic deviancy, schizophrenia, peer pressure and pornography use.

A noteworthy relationship was also found using Sexual Aggression factor scores II, III and IV as the independent measures, with a canonical correlation of R=.32015 (Wilks lambda = .84112, F=2.29778, df=36/1371.67, p < .000). The squared canonical correlation coefficient for Function II indicates that 10.2% of the variance is linearly shared by these two variable sets after optimal weighting by the Function II standardized function coefficients. By examining the function coefficients, the variables that contributed most to Function II were Anger-Trait, Anger-Reaction, Anger-in, Anger-out, schizophrenia, and peer pressure. The variables that contribute most to Function II according to absolute values of the structure coefficients were Anger-State, Anger-in, schizophrenia, and peer pressure.

Other aspects of the canonical correlation analysis examined were communality, adequacy coefficients and redundancy coefficients. A communality coefficient is the sum of all of a variable's squared structure coefficients (Thompson, 1980a; Thorndike, 1977). These values indicate what proportion of each variable's variance is reproducible from the canonical results, or how useful each variable was in defining the canonical solution.

The variate adequacy coefficient consists of the average of all the squared structure coefficients for the variables in one set with respect to one function. These coefficients indicate how "adequately", on the average, a given set of canonical variate scores perform with respect to representing all of the variance in the original, unweighted variables in the set (Thompson, 1984). The variate adequacy coefficients were 18.56% and 24.42% for Function I, and 24.99% and 6.32% for Function II.

The redundancy coefficient [Rd] is an index of the average proportion of variance in the variables in one set that is reproducible from the variables from the variables in the other set. This coefficient is calculated by multiplying the variate adequacy coefficient times the squared canonical correlation coefficient for the canonical function (Stewart & Love, 1968). The redundancy coefficients were 4.98% and 6.55% for Function I and 2.56% and 6.31% for Function II.

Prediction of Aggression Total Score

To assess the degree to which the independent variables successfully predict sexual aggression total score, a multiple regression analysis was conducted. The multiple R for the 13 independent variables and the criterion of sexual aggression was .50622 (F=12.35080, df=13/466, $p < .0001$). The percentage of variance in sexual aggression accounted for by the independent variables was of 25.63% ($.50622^2$), with an adjusted R square of .23551. The beta weights and structure coefficients for each independent variable are presented in Table 11.

INSERT TABLE 11 ABOUT HERE

The predictor variables contributing the most to predicting sexual aggression, according to the beta weights, were Pornography Use scale, Impulsivity scale, Anger-Trait scale, Psychopathic Deviant scale and the Peer Pressure scale. In reviewing the structure coefficients (Thompson & Borrello, 1985), the variables which contributed the highest individual variance to sexual aggression are: Hostility Towards Women, Impulsivity, Anger-Trait, Anger Temperament, Anger-out, Psychopathic Deviant scale, Schizophrenia scale, Peer Pressure scale, and the Pornography Use scale.

Predictors of Likelihood to Rape

The degree to which the independent variables successfully predict likelihood to rape was also investigated. The multiple R for the 13 independent variables and the criterion of likelihood to rape was .37750 (F=5.95721, df=13/466, $p < .0001$). The percentage of variance in sexual aggression accounted for by the independent variables was 14.25% ($.37750^2$), with an adjusted R square of .11858. The beta weights and structure coefficients (Thompson & Borrello, 1985) for each independent variable are presented in Table 12.

INSERT TABLE 12 ABOUT HERE

The following predictor variables contributed the most to predicting likelihood to rape, according to the absolute values of the beta weights, were Pornography Use scale, Anger-in, Anger-Trait, Anger-State, and Hostility Towards Women. The variables that contributed the highest individual variance to sexual aggression according to the structure coefficients were: Pornography Use, Anger-in, Anger-State, Schizophrenia scale, Psychopathic Deviant scale, and Anger-out and Anger-Trait.

Ancillary Results

One-way five-level ANOVAs were calculated separately using each of the four factor scores as dependent variables and the relationship between the victim and offender in cases of sexual aggression as the way of factor. Statistically significant differences ($F=11.6237$, $p < .0001$) were noted for the factor of "Threat of Physical Force" (Factor II). Threatening to use physical force to obtain sex was used more during first dates ($M=-1.2704$, $SD=3.0038$) than with acquaintances ($M=.0004$, $SD=.9564$) casual dating relationships ($M=.1217$, $SD=.5707$), more serious relationships (girlfriend) ($M=,0686$, $SD=.5320$), and long-term relationships/marriage ($M=-.0381$, $SD=.9592$). This difference involved an eta^2 effect size of 8.92 percent.

Statistically significant differences ($F=11.6237$, $p < .0001$) were also noted for the factor of "Ambiguous Circumstances" (Factor IV). Miscommunicating or lying to obtain sex was used more during causal dating ($M=.2981$, $SD=1.0463$) than first dates ($M=-.0737$, $SD=1.1231$), with acquaintances ($M=-.4519$, $SD=1.0904$), more serious relationships (girlfriend) ($M=-.2726$, $SD=.7211$), and long-term relationships/marriage ($M=-.2566$, $SD=.7140$). This difference involved an eta^2 effect size of 9.18 percent. Figure 1 graphically displays these results.

INSERT FIGURE 1 ABOUT HERE

Multivariate analysis of variance was calculated between Caucasian males and Hispanic males for the four sexual aggression factor scores. Statistically significant differences (F=2.150, p < .072) were not found.

Cross-validation Study of the Canonical and Multiple Regression Analyses

Since the results of the canonical correlation yielded a large effect size and statistically significant coefficients, a cross-validation procedure was employed. Cross-validation procedures can provide the researcher with an estimate of the stability of the results across samples (Fish, 1986). It is important to empirically evaluate the likelihood of result replicability , since statistical significance testing does not inform judgment about replicability (Carver, 1978).

Cross-validation, recommended as an appropriate invariance procedure for canonical correlation analysis (Fish, 1986; Thompson, 1984), involves splitting a sample randomly into two subgroups (usually of unequal size) and performing separate canonical correlation analyses on each subgroup. In addition, new predictor and criterion composite scores for one group are derived from standardized function coefficients of the second. Similarly, predictor and criterion composite scores for the second group are derived from standardized function coefficients of the first group. The new composite scores are correlated and compared for an invariance estimate. Table 13 contains the invariance coefficients for the canonical cross-validation.

INSERT TABLE 13 ABOUT HERE

In addition, a cross-validation methods was employed on the multiple regression analyses. The invariance coefficient for Group 1 was .7912 and for Group 2 it was

.6657 for the dependent variable of Sexual Experience/Aggression. For the dependent variable of Likelihood To Rape, the invariance coefficient for Group 1 was .6130 and for Group 2 it was .6469. These results indicate in Tables 14 and 15 present the invariance statistics for the cross-validation procedures.

INSERT TABLES 14 AND 15 ABOUT HERE

Discussion

The purpose of this study was to investigate the relationship between several charaterlogical traits, not throughly examined previously, involvement in sexual aggression, and reported likelihood to rape. These traits include anger, hostility toward women, impulsivity, psychopathology, and pornography use. The instruments used to measure these traits were the State-Trait Anger Expression Inventory (STAXI), the Hostility Toward Women Scale (HTW), Barratt's Impulsivity Scale (BIS), the Psychopathic Deviant (Pd) and the Schizophrenia (Sc) scales from the MInnesota Multiphasic Personality Inventory-2 (MMPI-2), and a pornography use questionnaire. In addition to these characteristics, the influence of peer relationships, and the relationship between the offender and the victim were investigated. The instrument used to measure sexual aggression, the Sexual Experiences Survey, was factor analyzed to determine factor structure and if the measure isolates several different types of sexual aggression. The incidence of sexual aggression was also noted. The relationship between the predictor variables and being involved in sexual aggression was investigated, as well as the amount of variance accounted for by these variables in sexual aggression and in the reported likelihood to rape.

Incidence. As reported in Table 1, the percentage of males who used some type of verbal pressure to obtain sexual intercourse on at least one occasion was 37%. Two percent of the sample threatened to use physical force if the woman would not comply

with sexual intercourse. Ten percent of the males used physical force to obtain some type of physcial activity ranging from kissing to intercourse. One percent of the sample reported using physcial force or threatening to use physical force to obtain oral or anal intercourse. The percentage of males who admitted to using force to obtain sexual intercourse was 2.4%, while 1.6% of the males admitted to raping a woman. These rates are within the range of those found in previous studies (Byers & Lewis, 1988; Greendlinger & Bryne, 1987), but are more similar to studies with lower incidence rates.

The low frequency of sexual aggression may be due to several factors. First of all, these rates could be an accurate estimate of the incidence of sexual aggression on this college campus. The university used is more conservative and traditional than the norm for most college institutions, and is also located in a conservative state. Therefore, these students may be more conservative sexually and therefore not engage in as much sexual activity. This is not an extremely likely explanation, because Muehlenhard and Linton (1987) found higher incidence rates at the same univeristy. The mean age for the present sample was 19.2 , with 66% of the sample being under the age of 20, and the mean grade level of the sample was at the freshman level. Therefore, it could also be that incidence rates obtained were due to the sexual inexperience of the sample and their shorter period of time in a college environment.

Another explantion for the lower incidence rate obtained for this sample is the recent media attention given to date rape and sexual aggression. College males today may be more aware of what is date rape and therefore less likely to admit to sexually aggressive acts because of the need to view themselves as engaging in socially desirable behavior. In addition, on this campus, a large predominantly male organization was recently accused of engaging in sexual aggression and sexual harassament of women within the same orgainzation. There was negative publicity both locally and nationally due to these events. These events may have also led this sample to report lower incidence rates of

sexual aggression. The males in this sample may have been more reluctant to admit to behavior that was recently negatively publicized concerning their university.

The incidence for reporting a likelihood to rape if assured of not being caught is also comparable, but some what lower, than that found in previous research (Malamuth, 1981). Approximately 3% of the present sample reported being unsure if they would rape a woman if the were assured of not being caught or punished. The percentage of males who reported being "likely" was .6% and the percentage of males who reported they were "very likely" was 1.6%. Approximately 80% of the sample reported that were "very unlikley" to rape a woman, and 7.5% reported they were "unlikely." Similar explanations can be given for the lower percentage of males reporting a likelihood to rape as those given above for the lower incidence of sexual aggression, with the exception of the sexual inexperience interpretation.

Research Question I. What is the factor structure of the Sexual Experiences Survey?

As reported in Table 8, the Sexual Experiences Survey did break down into four orthogonal factors. The factors were labelled: (I) "Threat of Physical Force", (II) "Use of Physical Force", (III) "Insistence", and (IV) "Ambiguous Circumstances." It appears that Koss and Oros' (1982) survey of sexual experience does indeed measure different types of sexual aggression. The factors of "Use of Physical Force" and "Threat of Physcial Force" are fairly obvious as to the content contained in the questions in these two factors. The factor of "Insistence" included items which involve uncontrolled sexual arousal, threatening to end a relationship if sexual intercourse did not occur, and using continual arguments to obtain sexual intercourse. The factor of "Ambiguous Circumstance" involved obtaining sexual intercourse by lying, the woman misinterpreting the level of intimacy desired by the man, and consensual sexual intercourse.

The incidence of sexual aggression can be broken down into these four factors and specific variables can be linked to the behavior described by the various factors. This would allow for a better understanding of what traits and variables are linked to specific

types of sexual aggression, and whether there are any noteworthy differences in the degree of sexual aggression committed. Examining the relationship between these four uncorrelated factors of sexual experience and related traits was in fact what the present researcher has done.

Research Question II. What is the relationship between males being involved in various degrees of sexual aggression and the following variables: (a) duration of the relationship, (b) hostility toward women, (c) anger, (d) impulsivity, (e) psychopathology (psychopathic deviant and schizophrenia), (f) peer group pressure, and (g) pornography use? The four factor scores, discussed above, were used as dependent variables and scores on the 13 scales or subscales of the instruments, used to examine various character traits, were the independent variables.

Canonical Function I indicates that the factors of "Ambiguous Circumstance", "Use of Physical Force", and "Insistence" are related most strongly to the characteristics of pornography use, psychopathic deviancy, and impulsivity. As reported in Table 10, these two variables sets share 26.8% of the variance in Function I. Other variables or characteristics related to these three sexual aggression factors were low scores on hostility toward women, Anger-out, and schizophrenia, with high scores on Anger-control, and peer influence.

The sexual aggression factor which shares the majority of the variance in canonical Function I is the "Ambiguous Circumstance" factor, which shares 45.27% of the variance. "Use of Physical Force" shares 21.18% and "Insistence" shares 19.54% of the variance with Function I. Therefore, the characteristics mentioned above are most predictive of men saying things they do not mean and having women misinterpret the level of sexual desire they want, as well as men actually using physical force and using verbal pressure to obtain sex. Strikingly, pornography accounts for 71.85% of the variance of Function I. This is a very interesting finding. Pornography use is the variable most strongly related to a man's poor communication about his sexual desire,

and his use of physical force and verbal pressure. This result is consistent with research linking pornography to sexual aggression.

Contrary to previous research, low scores on psychopathic deviancy and impulsivity were related to the sexual aggression factors, where as peer influence and Anger-control positively predicted sexual ambiguity, use of physical force and verbal pressure. The more influence men receive from their peers to obtain sex and the more they monitor and prevent the experience and expression of anger, the more likely they are involved in sexual aggression.

The results of canonical Function II indicate that the factors of "Ambiguous Circumstance", "Use of Physical Force", and "Insistence" are related most strongly to the characteristics of Trait Anger, State Anger, Anger-reaction, Anger-in, Anger-out, schizophrenia and peer pressure. As reported in Table 10, these two variables sets share 10.25% of the variance in Function II. The sexual aggression factor that shares the majority of the variance in Function II is the "Use of Physical Force" factor, which shares 36.66% of the variance. "Ambiguous Circumstance" shares 31.34% and "Insistence" shares 22.84% of the variance with Function II. Therefore, the characteristics mentioned above are most predictive of men actually using physical force, men saying things they do not mean and having women misinterpret the level of sexual desire they want, as well as men using verbal pressure to obtain sex.

Several interesting relationships were noted for canonical Function II. Male involvement in using physical force and verbal pressure to obtain sex were related to low scores on the traits of State Anger, Anger-reaction, Anger-in, Anger-out, schizophrenia and peer pressure and high scores on Trait Anger. Therefore, males who use physical force and verbal pressure to obtain sex experience anger and frustration less frequently, are less sensitive to criticism and negative evaluations, and are less likely to suppress their anger and express it through aggressive behavior. In addition, males who use

sexual aggression are less influenced by peer pressure and are seen as well-balanced, conventional, responsible and compliant.

A striking finding indicated by this function is that men who said things they did not mean to obtain sex and had women misinterpret their level of sexual desire scored higher scores on the traits of State Anger, Anger-reaction, Anger-in, Anger-out, schizophrenia and peer pressure and lower scores on Trait Anger. Therefore, males who manipulate circumstances to obtain sex experience anger and frustration more frequently, are sensitive to criticism and negative evaluations, and are more likely to suppress their anger in some situations and express it through aggressive behavior in others. In addition, these males are more influenced by peer pressure and are seen as aggressive, hostile, impulsive, feel inferior, misunderstood, and unaccepted, and show poor judgment. These findings are consistent with the hypotheses of this study and past research. This result indicates that males who use more covert methods of sexual aggression may have more characterlogical difficulties and are more influenced by external forces than males who use more overt forms of coercion.

Research Question III: How much of the relative variance in sexual aggression and date rape is explained by (a) the relationship between the victim and offender, (b) likelihood to rape, (c) hostility toward women, (d) anger, (e) impulsivity, (f) psychopathology, (g) reference group, and (h) pornography use?

As reported in Table 11, 25% of variance in sexual aggression was predicted by the 13 independent variables used in this study. Self-reported involvement in sexual aggression was predicted mainly by pronography use, psychopathic deviancy, trait anger, impulsivity, and peer pressure. Pornography use accounted for 12% of the variance in sexual aggression. The more frequently males used pronography, the more violent the pornography used, and the more coercive they were with women to get them to engage in acts viewed in pornography, then the more likley they were to be involved in coercive types of sexual aggression and rape, such as threats of physical force and

physical force. Psychopathic deviancy accounted for 1.8% of the variance in sexual aggression. Those males who scored lower on the psychopathic deviancy scale were involved in advanced forms of sexual activity that included more extreme forms of coercion. Trait anger accounted for 1.8% of the variance in sexual aggression. Those males who have lower trait anger were involved in more advanced forms of sexual aggression, such as threat of physical force, physical force to obtain petting, oral sex, or intercourse. Impulsivity accounted for 1.3% of the variance in sexual aggression. Males who scored lower on impulsivity were involved in more advanced forms of sexual aggression. Peer pressure accounted for .93% of the variance in sexual aggression. Males who receive more pressure from peers to engage in sexual activity were involved in more advanced forms of sexual aggression.

The variable that contributed the highest individual variance was pornography use. It shares 70% of its variance with sexual aggression, indicating that the more frequently males used pronography, the more violent the pornography used, and the more coercive they were with women to get them to engage in acts viewed in pornography, then the more likley they were to be involved in more advanced forms of coercive sexual aggression and rape. Peer pressure shared 24.2% of its variance with sexual aggression. This indicates that males who experienced more pressure from their peers were involved in more advanced forms of sexual aggression.

Several other variables shared high individual variance, ranging from 18.21% to 33.04%, with sexual aggression. All of these variables also had a negative relationship with sexual aggression. Therefore, males who scored low in impulsivity, psychopathic deviancy, hostility toward women, expressing anger directly toward others, schizophrenia, expressing anger easily, and trait anger were involved in less sexually aggressive behaviors.

Research Question IV: How much of the relative variance in likelihood to rape is explained by (a) hostility toward women, (b) anger, (c) impulsivity, (d) psychopathology (psychopathic deviant and schizophrenia), (e) reference group, and (f) pornography use?

As reported in Table 12, 14% of the variance in likelihood to rape was predicted by the 13 independent variables used in this study. The likelihood that a male will rape a woman, if assured of not being caught, is predicted most by pornography use, trait anger, hostility toward women, anger suppression, and state anger. Pornography use accounted for 6.59% of the variance in likelihood to rape. Males who used less pornography were more likely to report a likelihood to rape. This result is contrary to the findings of Malamuth and Briere (1986) and Check and Guloien (in press) who found sexually violent and nonviolent, dehumanizing pornography exposure to be related to self-reported likelihood to rape. This result indicates that some males in the general population, who are not influenced by the attitudes portrayed in pornography, still condone rape and report a likelihood to use sexual force to obtain intercourse.

Low trait anger accounted for 6.23% of the variance in the likelihood to rape. Therefore, males who are less angry and experience anger less frequently report a stronger likelihood to rape. In addition, less hostility towards women predicted a likelihood to rape. This result is contrary to the findings of Malamuth and Check (1985). These researchers found that men who score high on hostility towards women also report a high likelihood to rape. The two traits that related positively to a high likelihood to rape were Anger-in (the frequent experience of intense anger which tends to be suppressed) and State Anger (the current or situationally related experience of intense anger). Based on these findings it seems that a likelihood to rape is related more to men suppressing intense anger over time and experiencing intense anger at the time they were asked about their propensity to rape. Therefore, a high likelihood to rape is related more to experiencing intense anger.

Conclusions

Some of these results are contrary to previous research and what might be expected for sexually aggressive males. First of all, the results of this study indicate that males who are less impulsive are involved in sexually aggressive behavior. This is contradictory to the findings of Petty and Dawson (1989) and Liska and Roth (1988). The low scores on impulsivity may be an artifact of the instrument used. The Barratt Impulsivity Scale (1990) has not been used in previous sexual aggression research, but has been used in research investigating other types of aggression. In addition, this scale has been linked to and correlated with anger and hostility measures. The low scores on impulsivity would seem to indicate that sexual aggression is not an impulsive act, but one that involves some control and forethought. The result also indicates that the males who are involved in sexual aggression are not generally or characterlogically impulsive.

Males who were involved in sexual aggression and date rape scored lower in psychopathic deviancy and schizophrenia compared to males who were not involved in more advanced forms of sexual aggression. Previously, Koss et al. (1985) did not find the Pd (Psychopathic Deviant) and the Sc (Schizophrenia) scales of the MMPI to differentiate between three types of sexually aggressive men. Research investigating rapists have found these two scales to differentiate rapists from other types of convicted sex offenders (Armentrout & Hauer, 1978; Kalichman, 1990; Rader, 1977). The results of the present study indicate that males who are involved in more advanced forms of sexual aggression are more conventional, more conservative, concerned about their status, are persistent, are very critical of themselves, tend to be somewhat restrained in their relationships, and aviod deep, emotionally involved relationships.

These charactertistics do appear to relate to sexual aggression. If males are concerned about what others think of them, criticize themselves for not achieving sex with women and tend to avoid deep, emotional relationships, then this may lead to sexually aggressing against women. It does seem surprising that sexually aggressive males did not score on

the high end of these two scales, because high scores indicate impulsivity, immaturity, hostility, feeling misunderstood, a disturbed mood and aggressiveness. Although, these traits are consistent with the resulting scores on the other measures used to predict sexual aggression. Sexually aggressive males scored lower in the traits of impulsivity, hostility toward women and anger.

The results indicated that sexually aggressive males were less hostile toward women compared to nonsexually aggressive males. This is contrary to previous research which found a relationship between hostility towards women and use of sexual aggression against women (Check et al., 1985; Crossman, 1988). Interpersonal aggression and hostility did not play a factor in males committing acts of sexual aggression.

Lastly, highly sexually aggressive males have less anger and express anger directly at others less frequently than less sexually aggressive males. This result is also contrary to previous research which has found a relationship between generalized anger, anger expression, and self-reported sexually aggressive behavior (Calhoun, Kelley, Amick, & Gardner, 1986; Crossman, 1988). Therefore, the results of the present study seem to indicate that for this sample, sexual aggression was more an act of obtaining sex than the result of hostility towards women and anger. In addition, the results indicate that ambiguous sexual situations and the use of verbal pressure and physical force occurs in males who are not specifically hostile towards women, are in control of their anger and are seen as well-balanced, conventional, responsible and compliant. These results are contrary to previous studies and expose the difficulty in detecting sexually aggressive males.

Previous sexually aggressive research that was corroborated involves the variables of peer influences and pornography use. Males who experience more pressure from their peers are involved in more advanced forms of sexual aggression. These males feel a great deal of pressure from peers to engage in premarital sex and report that they would loose peer status if they were a virgin. This result is similar to Koss et al. (1985) and

Kanin's (1985) research which found that men who place a high value on sexual prowess, and are in a peer group which legitimizes sexually aggressive behavior, are involved in sexually aggressive behavior. Therefore, it does seem that involvement in sexually agressive behavior is related to having peer groups which condone sexually aggressive behavior and encourage sexual activity. It also seems that these males conform more to peer pressure. Kanin (1985) suggests that peer group and primary group influences may affect aspects of personality development which lead to generalized hostility toward females, aggressive behavior, and a hypererotic orientation.

The major finding of the present study is that pornography use was found to be associated with involvment in sexual aggression. The more frequently males used pronography, the more violent the pornography used, and the more coercive the portrayals were in the pornography they used, then the more likley they were to be involved in coercive types of sexual aggression and rape. This is a striking finding. Pornography use was found to be the strongest predictor of male involvement in sexual aggression. This corroborates Check and Guloien's (in press) research which found that the use of nonviolent, dehumanizing pornography was related to more involvement in acts of sexual aggression. Therefore, these males may become disinihibited to aggression from using and viewing pornography. These disinhibition effects may be confounded by a high level of anger or frustration or by drugs and alcohol (Bowen, 1987). Donnerstein (1984) found that materials that depict aggression or unequal power relationships, portray women as sex objects, depict coercion in sexual activity, or feature women in submissive and objectified roles disinhibit expression of negative attitudes about women as well as escalate the trivilization of rape. Pornography appears to create or reinforce rape-supportive attitudes as well as allow men to condone the use of physical force to obtain sex. Malamuth and Briere (1986) also found evidence for their hypothesis that the specific fusion of sex and violence may contribute to sexual aggression. They

discovered that self-reported likelihood of sexual aggression was related to attitudes and pornography.

Unique Contributions of This Study:

1. Large Sample Size. One unique feature of this study was large sample size. The greater the sample size, the greater the power and the more sensitive the study in detecting treatment differences (Keppel, 1982). Therefore, due to the sample size used, the results of this study may be more representative and more generalizable.

2. Multivariate Analysis Used. Another strength of this study is the use of multivariate analyses (Fish, 1988). This procedure allows researchers to compare several different variables simultaneously. Three advantages to the use of MANOVA are (a) allowing the researcher to look simultaneously at relationships among variables, (b) learning more about the data by looking at the variables in some combination or pattern, and (c) controlling inflation of Type I experimentwise error. This is particularly useful in the social sciences, in which measurement is considerably less than perfect. Multi-operationalizing constructs and using multivariate methods to assess the effects of treatments may provide a more valid assessment of treatment effects (Cole et al., 1981).

3. Investigating Measurement Reliability and Validity. As reported by Tables 2 through 7, reliability analyses were calculated on all of the instruments used in this study. This is another strength of this study because reliability is not only a function of the instrument, but the sample as well (Dawis, 1987). Therefore, it is important to know how reliable the scores are for the sample used before interpretations are made, because of this influence on results. For this study, the reliability coefficients for the instruments used are considered acceptables (Nunnally, 1978). In addition, the validity of the criterion measure was explored in detail using factor analytic results (Gorsuch, 1983; Nunnally, 1978), and these results in themselves may be an important contribution to the literature.

4. Conducted Replicability Analysis. As reported in Tables 13 through 15, replicability studies were conducted for the canonical correlation and the multiple regression analyses. This was to determine the likelihood that the results are stable and representative of college males. Cross-validation methods are recommended as an appropriate invariance procedure for canonical correlation analyses and multiple regression analyses (Fish, 1986; Thompson, 1984; 1989). Therefore invariance procedures were also used in the present study.

In summary, sexuality is an important part of life and of intimate relationships between people. Even though sexual behavior is natural, it is not something that should be forced on any individual under any circumstances. Sexual coercion and rape have been pervasive and long-standing problems in society. Researchers and various types of institutions have attempted to understand this phenomenon and to try to put an end to this aggressive behavior. The present study provides important information that may assist in understanding what factors contribute to males engaging in sexual coercion. This, in turn, amy lead to assisting individuals and institutions in the prevention of sexually coercive behaviors of males.

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Table 1

Incidence of Sexual Aggression Reported on the Sexual Experiences Survey (n=480)

Item	Frequency	Percentage
1. Willingly participated in sexual intercourse	343	69.4
2. Been in a situation where the level of sexual intimacy desired was misinterpreted	234	47.4
3. Been in a situation where you became so sexually aroused that it was considered useless to try and stop him, even though the woman did not want to have intercourse	39	7.9
4. Occurrence of sexual intercourse due to threatening to end the relationship	17	3.4
5. Occurrence of sexual intercourse due to pressuring the woman by continual arguments	34	6.9
6. Occurrence of sexual intercourse due to saying things you really did not mean	133	26.9
7. Kissing or petting due to physical force used, when the woman did not want to	28	5.7
8. Tried to obtain sexual intercourse through threatening to use physical force, when the woman did not want to	5	1.0
9. Tried to obtain sexual intercourse through using physical force even though the woman did not want to	12	2.4
10. Sexual intercourse obtained through threatening to use physical force when the woman did not want to	5	1.0
11. Sexual intercourse obtained through using physical force, when the woman did not want to	12	2.4
12. Man obtained sexual acts, such as oral or anal intercourse, through using threats or physical force, when the woman did not want to	8	1.6
13. Involved in rape	8	1.6

Table 2

Reliability Analysis for the Sexual Experiences Survey

	Item-Total Statistics	
Item	Corrected Item-Total r	Alpha-if-Item-Deleted
1	.194	.656
2	.266	.644
3	.326	.611
4	.409	.607
5	.404	.600
6	.343	.612
7	.436	.597
8	.193	.636
9	.414	.612
10	.286	.629
11	.468	.607
12	.345	.622
13	.212	.632

Note. Alpha for the total scores for the 480 subjects on all 13 items was .6391.

Table 3

Reliability Analysis for the Hostility Toward Women Scale

	Item-Total Statistics	
Item	Corrected Item-Total r	Alpha-if-Item-Deleted
1	.322	.804
2	.289	.805
3	.235	.808
4	.409	.800
5	.343	.803
6	.248	.807
7	.305	.804
8	.200	.809
9	.274	.806
10	.266	.806
11	.327	.804
12	.369	.802
13	.366	.802
14	.353	.803
15	.318	.804
16	.278	.806
17	.444	.799
18	.483	.797
19	.426	.800
20	.346	.803
21	.150	.811
22	.384	.801
23	.457	.799
24	.323	.804
25	.344	.804
26	.226	.808
27	.364	.802
28	.336	.803
29	.156	.811
30	.294	.805

Note. Alpha for the total scores for the 480 subjects on all 30 items was .8095.

Table 4

Reliability Analysis for the Barratt Impulsivity Scale

	Item-Total Statistics	
Item	Corrected Item-Total r	Alpha-If-Item-Deleted
1	.380	.700
2	.484	.696
3	.042	.721
4	.016	.724
5	-.495	.746
6	.292	.706
7	.331	.702
8	.259	.708
9	.465	.694
10	.299	.705
11	.261	.708
12	.346	.702
13	.281	.706
14	.408	.700
15	.154	.714
16	.290	.706
17	.455	.697
18	.322	.704
19	.020	.724
20	.439	.698
21	.338	.703
22	.156	.714
23	.323	.704
24	.272	.708
25	.213	.710
26	-.070	.728
27	.162	.714
28	.361	.701
29	.148	.714
30	.312	.705
31	.190	.712
32	.399	.699
33	-.222	.738
34	.124	.716

Note. Alpha for the total scores for the 480 subjects on all 34 items was .7165.

Table 5

Reliability Analysis for the State-Trait Anger Expression Subscales

Reliability Analysis for the State Anger Subscale

	Item-Total Statistics	
Item	Corrected Item-Total r	Alpha-If-Item-Deleted
1	.742	.921
2	.633	.928
3	.821	.917
4	.784	.919
5	.724	.923
6	.838	.916
7	.678	.925
8	.656	.926
9	.753	.921
10	.682	.926

Note. Alpha for the total scores for the 480 subjects on all 10 items was .9298.

Reliability Analysis for the Trait Anger Subscale

	Item-Total Statistics	
Item	Corrected Item-Total r	Alpha-If-Item-Deleted
11	.655	.844
12	.678	.842
13	.642	.846
14	.542	.854
15	.480	.859
16	.670	.845
17	.579	.851
18	.527	.856
19	.598	.849
20	.434	.864

Note. Alpha for the total scores for the 480 subjects on all 10 items was .8643.

Reliability Analysis for the Anger Temperament Subscale

	Item-Total Statistics	
Item	Corrected Item-Total r	Alpha-If-Item-Deleted
11	.756	.846
12	.776	.839
13	.767	.843
16	.694	.870

Note. Alpha for the total scores for the 480 subjects on all 4 items was .8834.

Reliability Analysis for the Anger Reaction Subscale

	Item-Total Statistics	
Item	Corrected Item-Total r	Alpha-If-Item-Deleted
14	.495	.663
15	.495	.662
18	.508	.654
20	.528	.642

Note. Alpha for the total scores for the 480 subjects on all 4 items was .7179.

Reliability Analysis for the Anger-In Subscale

	Item-Total Statistics	
Item	Corrected Item-Total r	Alpha-If-Item-Deleted
23	.298	.742
25	.370	.726
26	.415	.718
30	.482	.706
33	.473	.707
36	.392	.723
37	.540	.695
41	.522	.698

Note. Alpha for the total scores for the 480 subjects on all 8 items was .7416.

Reliability Analysis for the Anger-Out Subscale

	Item-Total Statistics	
Item	Corrected Item-Total r	Alpha-If-Item-Deleted
22	.488	.742
27	.317	.773
29	.504	.739
32	.492	.742
34	.522	.736
39	.480	.743
42	.602	.722
43	.380	.762

Note. Alpha for the scores for the 480 subjects on all 8 items was .7697.

Reliability Analysis for the Anger Control Subscale

	Item-Total Statistics	
Item	Corrected Item-Total r	Alpha-If-Item-Deleted
21	.691	.841
24	.606	.850
28	.718	.838
31	.699	.843
35	.509	.863
38	.470	.866
40	.635	.847
44	.640	.846

Note. Alpha for the total scores for the 480 subjects on all 8 items was .8655.

Reliability Analysis for the Anger Expression Subscale

	Item-Total Statistics	
Item	Corrected Item-Total r	Alpha-If-Item-Deleted
23	-.125	.858
25	.349	.840
26	.252	.844
30	.093	.850
33	.380	.839
36	.285	.842
37	.368	.840
41	.398	.838
22	.333	.840
27	.314	.842
29	.528	.834
32	.425	.838
34	.528	.834
39	.531	.834
42	.630	.830
43	.191	.846
21	.556	.832
24	.555	.832
28	.594	.831
31	.572	.832
35	.358	.840
38	.381	.839
40	.597	.830
44	.494	.834

Note. Alpha for the total scores for the 480 subjects on all 24 items was .8444.

Table 6

Reliability Analysis for the Pornography Use Questionnaire

	Item-Total Statistics	
Item	Corrected Item-Total r	Alpha-If-Item-Deleted
1	.392	.846
2	.502	.839
3	.445	.842
4	.448	.840
5	.490	.844
6	.547	.840
7	.539	.840
8	.603	.840
9	.597	.840
10	.544	.837
11	.542	.842
12	.624	.840
13	.596	.839
14	.350	.850
15	.498	.840
16	.628	.838
17	.557	.839

Note. Alpha for the total scores for the 480 subjects on all 17 items was .8491.

Table 7

Reliability Analysis of the Peer Influence Questions

	Item-Total Statistics	
Item	Corrected Item-Total r	Alpha-If-Item-Deleted
1	.3973	.5631
2	.3973	.5631

Note. Alpha for the total scores for the 480 subjects on the 2 items was .5631.

Table 8

Varimax Rotated Pattern Stucture Coefficients for the Sexual Expereinces Survey

Item	Item Content	Factor I	II	III	IV	h^2
9	Used phys. force/no intercor.	.85	.11	.12	.04	.76
11	Used phys. force/intercourse	.74	.10	.37	.03	.70
7	Phys. force/kissing or petting	.64	.17	.31	.10	.56
13	Raped a woman	.57	.07	-.00	-.02	.33
10	Threat. phys. force/intercourse	-.00	.87	.24	.01	.81
12	Threat.& phys. force/sodomy	.15	.88	.23	.01	.85
8	Threat. phys. force/no intercor.	.30	.73	-.15	-.03	.64
4	Threat. end relation./intercourse	.06	.18	.84	.04	.75
5	Press. by arguments/intercor.	.28	-.05	.68	.14	.56
3	So sexual arous./couldn't stop	.25	.18	.46	.04	.31
6	Lying/sexual intercourse	.02	.11	.10	.77	.62
1	Consenual intercourse	.11	-.13	-.13	.77	.65
2	Misinterpret sexual intimacy	-.05	.01	.30	.53	.38

Note. Structure coefficients greater than |.40| are underlined.

Table 9
Bivariate Correlation Coefficients

	FS1	FS2	FS3	FS4	Hostil	Impuls	Impulic	Impulim	Impulinp	Angsta	Angtra	Angtem	Angrea
FS2	0.00												
FS3	0.00	0.00											
FS4	0.00	0.00	0.00										
Hostil	-0.06	-0.09	**-.13	**-.16									
Impuls	-0.04	**-.15	**-.13	**-.19	**.31								
Impulic	-0.05	**-.12	**-.13	-0.08	**.28	**.82							
Impulim	0.05	**-.14	-0.06	**-.20	**.23	**.77	*.50						
Impulinp	-0.07	**-.14	*-.11	**-.15	**.21	**.75	**.43	**.34					
Angsta	-0.05	-0.03	**-.16	-0.07	**.44	**.24	**.20	**.22	**.12				
Angtra	*-0.09	-0.04	**-.21	**-.17	**.48	**.33	**.27	**.35	**.12	**.52			
Angtem	**-0.12	-0.02	**-.16	**-.14	**.37	**.28	**.19	**.33	**.11	**.45	**.85		
Angrea	-0.06	**-.16	**-.17	*-.12	**.42	**.23	**.24	**.24	**.05	**.43	**.82	**.46	
Anginn	0.00	-0.08	**-.16	-0.01	**.42	**.26	**.24	**.25	*.09	**.34	**.39	**.21	**.46
Angout	-0.01	0.06	**-.21	**-.12	**.38	**.34	**.28	**.32	**.18	**.38	**.67	**.66	**.41
Angcon	*.11	**-.13	*.12	**.13	**-.40	**-.30	**-.22	**-.27	**-.19	**-.29	**-.57	**-.62	**-.31
Angexp	-0.06	**-.13	**-.22	**-.22	**.55	**.41	**.34	**.38	**.22	**.46	**.75	**.70	**.54
Pdscale	-0.05	**-.17	**-.20	**-.20	**.47	**.39	**.31	**.31	**.28	**.34	**.41	**.37	**.27
Scscale	-0.04	0.03	**-.23	*-.11	**.52	**.46	**.41	**.34	**.30	**.42	**.41	**.29	**.37
Peerscal	*.10	0.03	0.05	**.24	**-.25	**-.17	**-.14	**-.15	*-.09	**-.28	**-.31	**-.25	**-.27
Pornscal	**.19	**.23	**.18	**.27	**-.21	**-.17	**-.13	**-.12	**-.14	**-.21	**-.22	**-.20	**-.14
Relation	0.07	*.01	-0.01	0.04	*-.12	**-.18	**-.18	*-.09	** -.15	**-.19	*-.09	-0.08	-0.08
Likeli	**-.14	**-.27	**-.28	-0.02	0.08	0.08	*.10	0.07	0.02	**.20	*.12	*.10	*.10
Sexextot	**.45	**.26	**.50	**.68	**-.23	**-.25	* -.18	**-.17	**-.22	**-.19	**-.27	**-.24	**-.20

Table 9 (cont.)

	Anginn	Angout	Angcon	Angexp	Pdscale	Scscale	Peerscal	Pornscal	Relation	Likeli
Angout	**.21									
Angcon	-0.07	**-.55								
Angexp	**.55	**.80	**-.80							
Pdscale	**.33	**.37	**-.35	**.49						
Scscale	**.48	**.32	**-.31	**.50	**.66					
Peerscal	**-.14	**-.27	**.24	**-.30	**-.24	**-.23				
Pornscal	*-.10	**-.28	**.24	**-.29	**-.21	**-.24	**.25			
Relation	-0.08	-0.08	0.05	*-.10	**-.17	**-.18	**.17	**.16		
Likeli	**.20	**.13	-0.05	**.17	**.18	**.18	-0.08	** -.28	*-.11	
Sexextot	**-.13	**-.21	**.21	**-.26	**-.29	**-.26	**.25	**.42	0.09	**-.29

* p<.05
** p<.01

Table 10
Canonical Correlation Analysis Results for Research Question 2

	Function I			Function II			Function III			Function IV			
Variable	Func.	Struc.	Stru^2	Func.	Struc.	Stru^2	Func.	Struc.	Stru^2	Func.	Struc.	Stru^2	h^2
Use Phys	0.374	0.374	14.01%	0.303	0.303	9.15%	0.593	0.593	35.16%	0.646	0.646	41.67%	100.00%
Threat Phys	0.460	0.460	21.18%	-0.606	-0.606	36.67%	0.487	0.486	23.67%	-0.430	-0.430	18.49%	100.00%
Insistence	0.442	0.442	19.54%	-0.478	-0.478	22.84%	-0.575	-0.575	33.05%	0.496	0.496	24.57%	100.00%
Ambiguous C	0.673	0.673	45.27%	0.560	0.560	31.34%	-0.285	-0.285	8.12%	-0.391	-0.391	15.27%	100.00%
Adequacy			25.00%			25.00%			25.00%			25.00%	
Rd			6.71%			2.56%			1.05%			0.55%	
Rc^2			**26.83%**			**10.25%**			**4.18%**			**2.19%**	
Rd			6.55%			0.65%			0.37%			0.21%	
Adequacy			24.42%			6.32%			8.77%			9.74%	
Hostil.	-0.036	-0.447	19.94%	-0.361	0.019	0.04%	0.018	0.212	4.48%	0.209	-0.032	0.10%	24.56%
Impulsi.	-0.266	-0.526	27.63%	-0.082	0.121	1.46%	-0.064	0.179	3.21%	0.593	0.345	11.90%	44.21%
Ang.-Stat	0.005	-0.394	15.51%	0.400	0.319	10.15%	-0.241	0.079	0.62%	0.109	-0.158	2.51%	28.79%
Ang.-Trai	-0.054	-0.496	24.55%	-1.418	-0.024	0.06%	2.519	0.472	22.24%	0.325	-0.561	31.48%	78.32%
Ang.-Temp	-0.129	-0.447	20.02%	0.385	-0.049	0.24%	-1.559	0.223	4.98%	-1.029	-0.607	36.87%	62.10%
Ang.-Reac	-0.025	-0.354	12.52%	0.484	0.038	0.15%	-0.881	0.419	17.56%	-0.570	-0.446	19.86%	50.08%
Anger-In	-0.011	-0.299	8.91%	0.560	0.518	26.88%	-0.301	0.090	0.80%	0.126	-0.204	4.16%	40.76%
Anger-Out	0.126	-0.424	17.95%	0.651	0.252	6.34%	0.644	0.558	31.08%	0.287	-0.173	2.98%	58.35%
Ang.-Cont	-0.034	0.405	16.41%	-0.030	0.053	0.28%	0.427	-0.043	0.18%	0.167	0.363	13.18%	30.05%
Psycho.	-0.273	-0.579	33.51%	-0.115	0.153	2.33%	0.263	0.379	14.36%	0.283	0.030	0.09%	50.29%
Schiz.	0.030	-0.522	27.21%	0.484	0.429	18.44%	0.145	0.280	7.85%	0.536	-0.158	2.48%	55.98%
Peer	0.159	0.464	21.49%	0.536	0.395	15.58%	-0.022	-0.119	1.40%	-0.226	-0.091	0.83%	39.31%
Porno.	0.708	0.848	71.85%	-0.015	-0.047	0.22%	0.432	0.230	5.30%	0.033	0.047	0.22%	77.60%

Table 11

Beta Weights and Structure Coefficients for the Multiple Regression Analysis Using **Sexual Aggression** as the Dependent Variable

Variable	beta Weights	Structure Coefficients
Pornography Use Scale	.351	.838
Psychopathic Deviant	-.134	-.574
Anger-Trait	-.134	-.539
Schizophrenia Scale	.000	-.516
Impulsivity Scale	-.114	-.494
Peer Pressure Scale	.096	.492
Anger Temperament	-.035	-.476
Hostility Toward Women	-.024	-.448
Anger-Out	.082	-.426
Anger Control	-.028	.416
Anger Reaction	.005	-.395
Anger-State	.030	-.373
Anger-In	.031	-.260

Note. The 13 independent variables have been sorted by the absolute values of the structure coefficients.

Table 12

Beta Weights and Structure Coefficients for the Multiple Regression Analysis Using **Likelihood to Rape** as the Dependent Variable

Variable	beta Weights	Structure Coefficients
Anger-State	.141	.535
Anger-In	.166	.532
Schizophrenia Scale	018	.487
Psychopathic Deviant	.112	.482
Anger-Out	.066	.358
Anger-Trait	-.250	.310
Anger Temperament	.115	.262
Anger Reaction	.090	.260
Peer Pressure Scale	.020	-.228
Pornography Use Scale	-.256	-.228
Hostility Toward Women	-.128	.209
Anger Control	.040	-.135
Impulsivity Scale	.026	.068

Note. The 13 independent variables have been sorted by the absolute values of the structure coefficients.

Table 13

Invariance Statistics for the Cross-Validation of the Canonical Correlation Analysis

	C111	C112	C121	C122	C211	C212	C221	C222	C311	C312	C321	C322	C411	C412	C421	C422
P111	.538[a]															
P112		.288[b]														
P121			.313[d]													
P122				.594[c]												
P211					.392[a]											
P212						.244[b]										
P221							.096[d]									
P222								.342[c]								
P311									.293[a]							
P312										.128[b]						
P321											.013[d]					
P322												.240[c]				
P411													.261[a]			
P412														-.038[b]		
P421															-.025[d]	
P422																.147[c]

[a] The Rc's for Functions I-IV, respectively, in subsample 1 (n=244).
[b] The shrunken Rc's for Functions I-IV, respectively, in subsample 1 (n=244), based on use of subsample 2's weights.
[c] The Rc's for Functions I-IV, respectively, in subsample 2 (n=256).
[d] The shrunken Rc's for Functions I-IV, respectively, in subsample 2 (n=256), based on use of subsample 1's weights.

Table 14

Invariance Statistics for the Cross-Validation of the Multiple Regression Analysis Using the **Sexual Experiences Survey** as the Dependent Variable

	Sexual Exper./Agg.	SYHAT11	SYHAT21	SYHAT21
SYHAT11	.5260[a] (n=224)			
SYHAT12	.4162[b] (n=224)	.7914[c] (n=224)		
SYHAT21	.3701[b] (n=256)			
SYHAT22	.5559[a] (n=256)			.6657[c] (N=256)

[a] The multiple correlation coefficient (R) for the invariance group.

[b] The "shrunken R" for the invariance group.

[c] The invariance coefficient for the invariance group.

Table 15

Invariance Statistics for the Cross-Validation of the Multiple Regression Analysis Using **Likelihood To Rape** as the Dependent Variable

	Likelihood To Rape	LYHAT11	LYHAT21	LYHAT21
LYHAT11	.3456[a] (n=224)			
LYHAT12	.2118[b] (n=224)	.6130[c] (n=224)		
LYHAT21	.3030[b] (n=256)			
LYHAT22	.4666[a] (n=256)			.6469[c] (n=256)

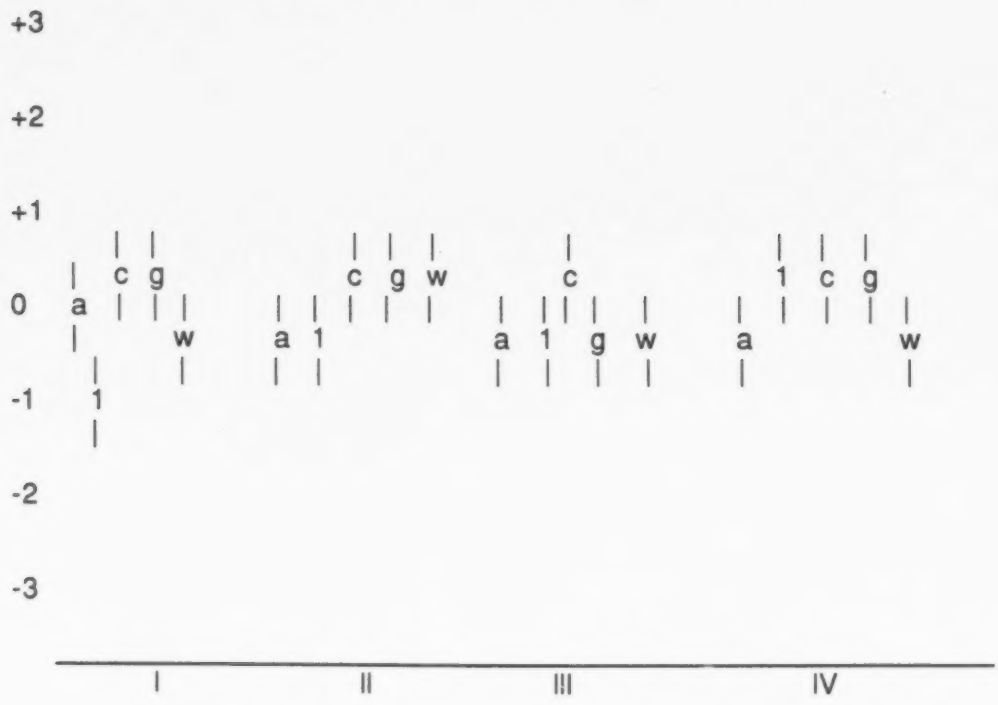
[a] The multiple correlation coefficient (R) for the invariance group.

[b] The "shrunken R" for the invariance group.

[c] The invariance coefficient for the invariance group.

Figure 1

Oneway Analysis of Variance for the Four Factor Scores and the Relationship with the Victim



a Acquaintance
1 First Date
c Casual Relationship
g Girlfriend
w Long-term Girlfriend/Wife

Note. The means on each factor for each group are noted by the letters; the mean factor score on each factor for all subjects combined is zero, since factor scores are in z-score form. The bands about each mean represent 95% confidence intervals.